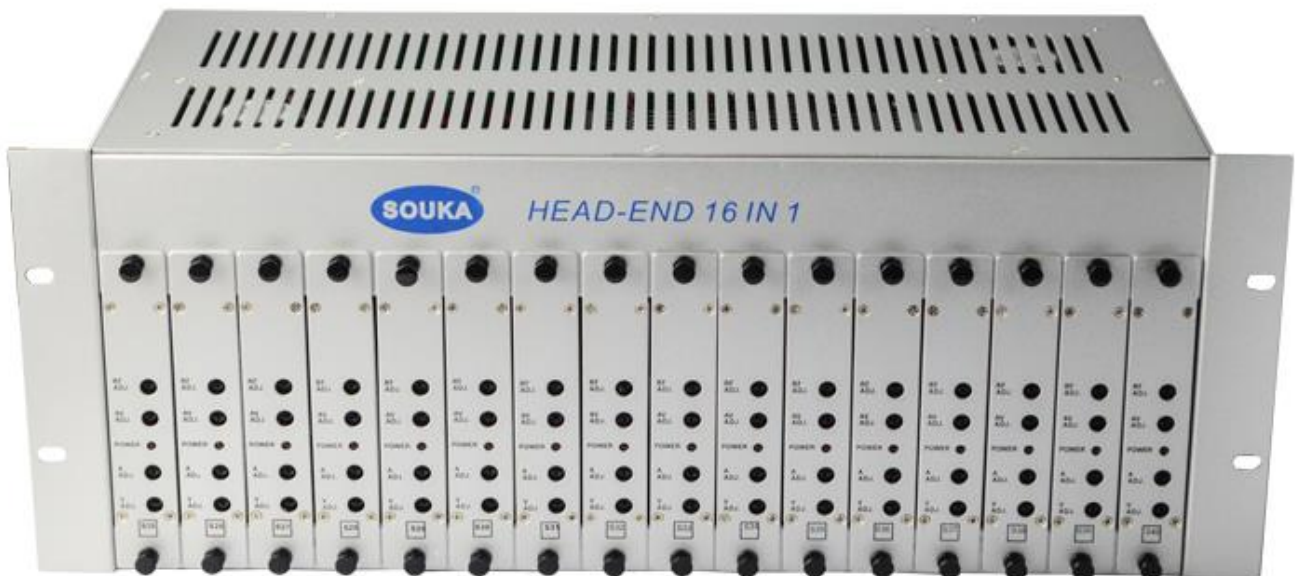


SOUKA



SK-16M
16 IN 1 HEADEND USER MANUAL
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INTRODUCTION

The SK-16M is a 4RU rack mounted chassis that allows for installation of up to 16 pieces microprocessor-controlled fixed mini modulators. Built-in active combiner eliminates unnecessary cabling and potential connection problem and ensures high output level. All modulator cards are perfect factory set to desired channels and proper offset.

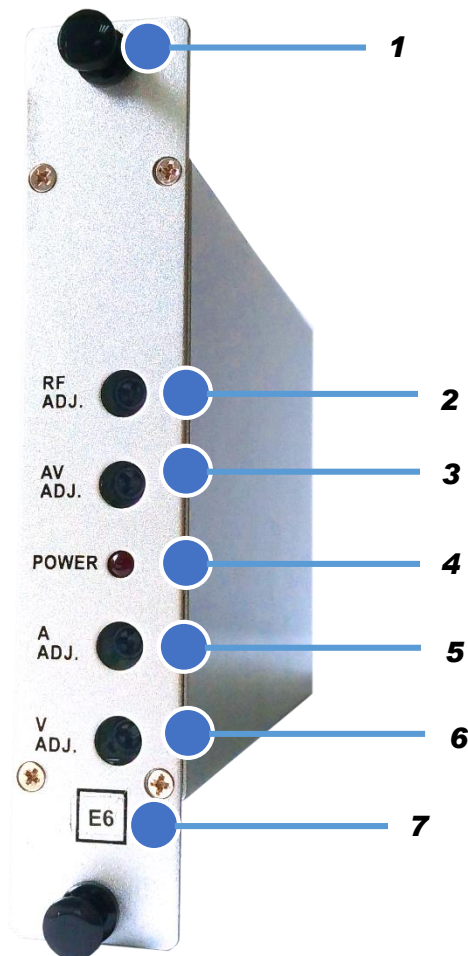
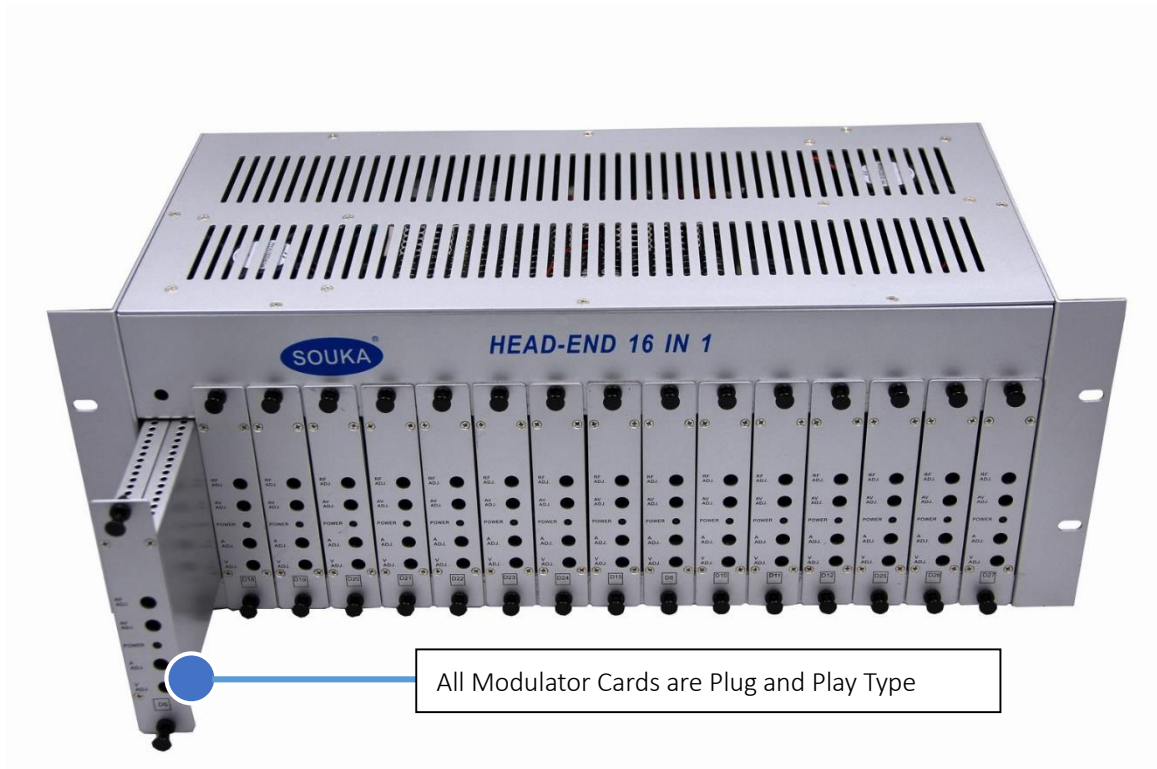
FEATURES

1. The vestigial sideband selectivity allows maintenance free adjacent channel configuration
2. Two cooling fans for long life performance
3. 45dBmV combiner output level, no need extra combiner
4. SAW(surface acoustic wave) filtering on IF for superior in band C/N
5. Front panel access controls enables easy setup
6. Available in NTSC or PAL configurations

SPECIFICATIONS

Chassis		
RF	Frequency Range	45 ~ 860 MHz
	Output Connector	F Connector
	Output Level	105 dB μ V (Adj.)
	Test Point	-20 dB
	Isolation Port to Port	\geq 35 dB
	Return Loss	\geq 12 dB
	Gain	+ 8 dB
GENERAL	Modulator Capacity	16
	Input Voltage Range	110V or 220V
	Cooling Fan	2
	Consumption	57W (Fully Loaded)
	Dimension	42 * 17 * 20 cm
	Net Weight	10 KG (Fully Loaded)
	Shipping Weight	3.7 KG (Chassis Only)
		11 KG (Fully Loaded)
Carton Size	53 * 30 * 24 cm	
Modulator Card		
RF	Output Frequency	45 ~ 860 MHz
	Output Level	113 dB μ V (Adj.)
	Output Connector	F Connector
	A / V Ratio	-11 ~ -18 dB (Adj.)
	Frequency Stability	\pm 5KHz
	Video Input Level	0.6-1.5Vp-p (87.5% Modulation)
	Video Input Connector	Yellow RCA
	Audio Input Level	1Vp-p (25KHz Dev.)
	Audio Input Connector	White RCA
GENERAL	Voltage	DC 5V

FRONT PANEL CONTROLS



1. **Button**

Hold the modulator card into the chassis

2. **RF ADJ.**

Adjustment for output level. The control is adjustable over a 17dB range. Turn clockwise to increase the level

3. **AV ADJ.**

Adjust the audio and video ratio over 18dB range. Please don't change since it's perfectly set in factory.

4. **POWER INDICATOR**

Red LED lights when power is applied to the modulator

5. **A ADJ.**

Used to adjust the deviation for audio modulation. Turn clockwise to increase deviation.

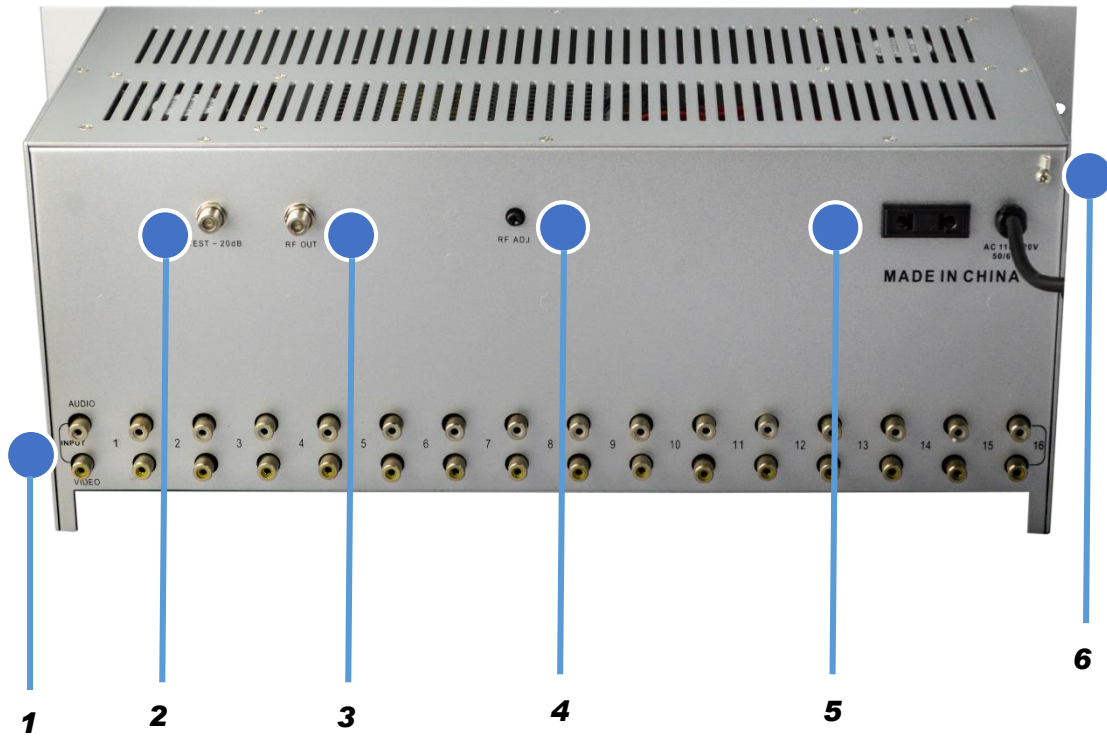
6. **V ADJ.**

This control adjusts the video modulation index which is set to 87.5%. Turn clockwise to increase the brightness.

7. **Channel Label**

To indicate the channel name

REAR PANEL CONTROL



1. VIDEO & AUDIO INPUT

Feed the video and audio signal into each modulator card

2. TEST POINT

Output level read at this point will be down 20dB from the actual output

3. RF OUTPUT

16 modulated CATV signals at 105 dB μ V maximum output is provided at this port

4. RF OUTPUT ADJ.

Adjustment for the combiner output level at the RF OUTPUT. The control is adjustable over an 8dB range. Turn clockwise to increase output level


5. POWER CORD SOCKET AND CORD

110V or 220V power source

6. GND

For modulator grounding

WARNING:

For the protection of your equipment and its proper working is necessary to connect the SK-16M to a ground connection. 

UNPACKING AND HANDLING

A full set **SK-16M** is shipped with all equipment assembled, wired, factory tested, and then packed in an appropriate shipping container. Ensure that all accessories are removed from the container and packing material before they are discarded.

INSPECTION

Inspect the front and rear of the equipment for shipping damage. Make sure the equipment is clean, and no wire, cables, or connectors are broken, damaged or loose.

DAMAGE IN SHIPMENT

Should any damage be discovered after unpacking the unit, immediately file a claim with the carrier. A full report of the damage shall be made and a copy forwarded to vendor.

PRECAUTIONS

PRECAUTIONS	REQUIREMENTS
Avoid heat buildup	Allow rack space (1'') between powered headend product in the equipment
Ensure easy access to rack wiring	Allow a minimum of 18 inches behind the equipment rack
Facilitate servicing and maintenance	Allow a minimum of 36'' of clearance in front of the equipment rack
Avoid direct heating or air conditioning	If unavoidable, use deflector plates
AC power source outlets	Locate equipment near sufficient outlets to provide power for test equipment and power tools
Rack support	Make certain rack supports are sufficiently rigid to support racks
Building leakage	Beware of dripping water onto equipment from leaky roofs, waveguide roof entries, and cold water pipe condensations

QUICK INSTALLATION

The **SK-16M** is designed for indoor 19'' rack. Make sure a space is left between modulators for air circulation. To prevent electric shock, never remove the ground pin. Insure that electrical input cables entering the building be connected to the building ground as close to the entry point as possible.

1. Feed in the Audio and Video connectors before turn on the power
2. Warm up the modulator and check the picture and audio

ADJUSTMENT

All SOUKA modulators are heat cycled at the factory and final adjustment are made with the units hot. Thus, allow a 20 minutes warmup before attempting any adjustments. You will need a signal level meter and a TV set.

1. Connect the video and audio cable from your source to the respective connector on the modulator. If you have several SK-16M, please connect the RF OUTPUT to the proper combiner. Levels can be read at the test point output of combiner output in the rear panel.
2. The AV ADJ. should always be between -15dB to -17dB below the VIDEO ADJ.. Once this ratio is set it will track with the VIDEO ADJ. (All are proper set at the factory.)
3. AUDIO and VIDEO modulation levels are set at the factory for plus or minus 25KHz deviation and 87.5% depth of modulation respectively. Although proper test equipment should be used, minor adjustment can be made utilizing a TV set.
 - 3.1 Connect the TV set to the final output test point so that its signal level input from the modulator is about +69dB μ V. If the colors look bright and there is sufficient sound without audio buzz, leave the

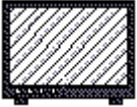
modulation adjustment alone. If there is occasional audio buzz, turn modulation control down slowly counter-clockwise until the audio is clean.

3.2 If the modulator picture is dark, raise the V ADJ. control slowly until the picture just becomes over bright and begins to distort. Lower the control about 1/8 turn from this point.

3.3 If the modulator audio is low, try and set TV audio level utilizing an off air signal. Subjectively match this level utilizing the A ADJ. control. Check that all audio levels are about the same when switching channels.

COMMON TROUBLESHOOTING

1. Herringbone in TV



Disconnect modulator from local channels and check modulated channel. If there is programming move the modulated channel. If the picture is snowy, use a low pass filter to block noise or data coming in from cable.

2. Horizontal Bars Rolling Through TV Picture



Check for a component of the system that is introducing DC power into the system. Disconnect that component and check TV. If the hum bars stop, use a DC blocker down stream from that component to block the power from getting to the TVs.

If the rolling is only on the modulated channels, check for impedance mismatch by adjusting the video level adjustment pot.

3. Vertical Bars Rolling Through TV Picture



Check for AC power getting on the line. Use a ground breaker in line.

4. Ghost on the Picture



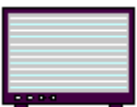
Check for low quality combiner/ splitter in system. Replace with high isolation combiner/splitter. Check the type of coax used in system. Inadequate shielding in coax will cause ghosting.

5. Snowy Picture

Verify the modulator is set up for the proper TV channel band.

Verify the TV is set up on the proper TV channel band.

6. Black and White Lines on one Local Channel



Move modulated channel up to a new channel. If problem persists and all of the inputs of a multiple input modulator are not being used, check default channels on modulator to see if default channel is set to the same channel that the problem channel is.

7. Modulated Picture is Too Bright or Washed out

Adjust video level adjustment potentiometer on the modulator front panel or rear panel of chassis.

If using a camera, check positioning of the lens to be sure it's not aimed at the sun or a reflection.

Adjust camera lens.

8. Modulated Picture is Too Dark

If the baseband video is being split, you might require a amplifier

Try to adjust video level potentiometer on the front panel of modulator or rear panel of chassis

If the video source is not being split, check input source directly into a TV

Adjust the video level adjustment pot on the chassis of the set top units to the proper brightness.

9. Noise on the Audio

Insert grounding block in line and ground coax cable before it enters the TV

Use professional grade audio/video interconnect between the components and the modulator

10. Audio is Too Low

Use a Y connector to combiner the left and right audio before entering the modulator

WARRANTY (1 YEAR)

Dingshengwei Electronics equipment has been thoroughly tested and found to be in proper operating condition when shipped from the factory and is warranted to be free from defects in materials or workmanship that may develop within one year of the date of purchase. DSW agrees to remedy such or furnish a new part, or at its option an entire unit, or any part of a unit that disclosed such defect, provided that the unit or part is returned to DSW or DSW authorized service facility according to the terms listed below.

Prior authorization with a return authorization number issued by DSW or its representative is required for all returns. The purchaser shall be responsible for all freight charges on shipment to DSW unless otherwise authorized. Charges to return a unit or part to purchaser will be paid by DSW. Claim for damage in shipment to the purchaser must be filed by the purchaser with the carrier in accordance with the carrier’s regulations.

DSW shall not be responsible for the shipping charge if the returned unit turns out to be flawless.

A Return Material Authorization (RMA) Number is required on all products returned to DSW. Regardless if the product is being returned for repair or credit. Before returning product, please contact the DSW sale who you contact with.

Buyer :		RMA Number:
Mode Number	Products ID Number	Problem

If there's not enough space in this form, please attach a separate sheet of paper.

Thanks for using our products.
For more products, please visit our website:
<http://www.soukacatv.com>